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TITLE

: OPTICALLY ACTIVE

CYCLOPENTENE-ALCOHOLS, THEIR

PRODUCTION AND UTILIZATION

Π $\mathsf{C} \; \mathsf{O} \; \mathsf{R}_1$

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ABSTRACT: PURPOSE: To obtain new optically active cyclopentene-alcohols useful as a medicine and an agricultural chemical, especially an intermediate for prostaglanding and readily obtain an optically active lactone by carrying out cyclizing reaction using the new compounds.

> CONSTITUTION: Optically active cyclopentene-alcohols expressed by formula I (R₁ is amino which may be substituted with alkyl; the mark * indicates asymmetric carbon atom), e.g. (+)-2-(N,N-dimethylcarbamoylmethyl)-3- cyclopenten-1-ol. The compound expressed by formula I is obtained by reacting cyclopentene esters expressed by formula II (R is alkyl) with an esterase having the ability to selectively hydrolyze only one of optical isomers of the compounds. The compounds expressed by formula II are obtained by reacting cyclopentene- alcohols expressed by formula III with a carboxylic acid expressed by the formula R₂COOH or its derivative in the presence of a catalyst. The compounds expressed by formula I are subjected to cyclizing reaction in the presence of a catalyst to afford an optically active lactone expressed by formula IV.

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